

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1. (Original) Device for administering xenon and/or a xenon-containing medium, in particular a xenon-containing gas mixture, to a patient, whereby the patient is connected to an inhalation system and to a cardio-pulmonary bypass system (CPB system), characterized in that the device comprises

- a) at least one source (X) of xenon and/or of a xenon-containing medium,
- b) at least one supply unit for xenon and/or for a xenon-containing medium in the inhalation system (V, 1, 1') and in the CPB system (M, 2, 2'),
- c) at least one dosage unit (S) for administering xenon and/or a xenon-containing medium in the inhalation system (V, 1, 1') and in the CPB system, and
- d) at least one analysis unit (S) for determining the xenon content in the inhalation system (V, 1, 1') and/or the CPB system (M, 2, 2').

2. (Original) Device according to claim 1, wherein the source (X) of xenon or of a xenon-containing medium is a source that yields gaseous xenon, optionally in a mixture with one or more other media, preferably gases.

3. (Currently Amended) Device according to claim 1 ~~or 2~~, wherein means for connecting the inhalation system (V, 1, 1') and the CPB system (M, 2, 2'), via which a media exchange (9) can be carried out between the two systems, are provided.

4. (Currently Amended) Device according to ~~one of the preceding claims 1 to 3~~ claim 1, wherein at least one reprocessing unit (W), which is connected to or can be connected to the inhalation system (V, 1, 1') and/or the CPB system (M, 2, 2') and that is used for the recovery of xenon from the previously mentioned system or system, is provided.

5. (Currently Amended) Device according to ~~one of the preceding claims 1 to 4~~ claim 1, wherein in addition to the analysis unit (S) for determining the xenon content in the inhalation system (V, 1, 1') and/or the CPB system (M, 2, 2'), at least one additional analysis unit, which is used to determine a media concentration and/or another parameter, such as flow, pressure, temperature, etc., is provided.

6. (Currently Amended) Device according to ~~one of the preceding claims 1 to 5~~ claim 1, wherein the CPB system (M, 2, 2') is designed as a closed system.

7. (Currently Amended) Device according to ~~one of the preceding claims 1 to 6~~ claim 1, wherein the CPB system (M, 2, 2') has a CO<sub>2</sub> absorber, a CO<sub>2</sub> adsorber and/or a CO<sub>2</sub> filtering device, preferably a permeative CO<sub>2</sub> filtering device.

8. (Original) Process for the administration of xenon and/or a xenon-containing medium, in particular a xenon-containing gas mixture, to a patient, whereby the patient is connected to an inhalation system and a cardio-pulmonary bypass system (CPB system), wherein  
the xenon content in the inhalation system (V, 1, 1') and/or the CPB system (M, 2, 2') is determined directly or indirectly, and  
xenon and/or a xenon-containing medium is at least occasionally administered from a source (X) of xenon and/or of a xenon-containing medium in the inhalation system (V, 1, 1') and/or in the CPB system (M, 2, 2').

9. (Original) Process according to claim 8, wherein at least one additional medium, preferably a gas or gas mixture, is at least occasionally fed to the inhalation system (V, 1, 1') and/or to the CPB system (M, 2, 2').

10. (Currently Amended) Process according to claim 8 ~~or 9~~, wherein in addition to the xenon content(s), additional media concentrations and/or parameters, such as flow,

pressure, temperature, etc., of the inhalation system (V, 1, 1') and/or the CPB system (M, 2, 2'), are detected.

11. (Currently Amended) Process according to ~~one of the preceding claims 8 to 10~~ claim 8, wherein the unconsumed xenon, contained in the inhalation system (V, 1, 1') and/or the CPB system (M, 2, 2'), is recovered (W).

12. (Currently Amended) Process according to ~~one of the preceding claims 8 to 11~~ claim 8, wherein in the administration of xenon and/or a xenon-containing medium in the inhalation system (V, 1, 1') and/or the CPB system (M, 2, 2'), the values in question cannot drop below a preset or presettable oxygen concentration in the inhalation system (V, 1, 1') and/or the CPB system (M, 2, 2').